

Recycling potential in 3D-printing processes

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Summary: Generative manufacturing processes – such as, in particular, the 3D-printing process, open up a wide range of options for restructuring product-manufacturing process chains. In particular since 3D printing processes are becoming widespread in private households, and use plastic as a raw material, 3D printing processes will cause the further spreading of plastic products. After processing and use, the 3D models are generally disposed of in a conventional manner, which further increases the demand for plastics, causes additional costs under certain circumstances, and pollutes the environment.

The aim of this scientific investigation is to illustrate the potential for recycling within the 3D printing process. To do so, the materials used today must be researched, and possible future materials evaluated. Based on this use of resources, approaches will be identified, along with the preconditions necessary for each material to be able to recycle them following the 3D printing process.

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